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EXAMINER	
RYMAN, DANIEL J	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/642,108	CALDWELL ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-18,20-41,45-59,61-82,85-100 and 102-123* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,8-18,20-41,45-47,49-59,61-82,85-88,90-100 and 102-123* is/are rejected.

7)☒ Claim(s) *7,48 and 89* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 25 September 2007 have been fully considered but they are not persuasive. On page 4 of the Response, Applicant asserts that Martin does not teach, "forwarding the PDU through the broadband packet network to an egress gateway irrespective of routing information contained within the data stream." Specifically, Applicant asserts that since Martin teaches that a "CIC code is inserted into the payload of each ATM cell so that the receiving SAC can route and reassemble the samples" (col. 3, lines 48-50), where the CIC is a "circuit identification code" that "is selected to route the call from the originating switch to the terminating switch" (col. 2, lines 7-10), "it follows that the ATM packets are not forwarded through the ATM network 'irrespective of routing information contained within the data stream'" (Response: p. 4). Examiner, respectfully, disagrees.

2. Martin discloses that the "SAC 30 is preprogrammed to recognize data arriving on a particular DS1 as being destined for a specific local switch" (col. 3, lines 42-44). The "SAC 30 translates the DS1 and the channel identification to a VPI and VCI and adds the data or voice samples to the payload of an ATM cell" (col. 3, lines 45-48, see also col. 4, lines 20-24 and col. 4, lines 45-49). Then the "ATM switch 34 switches the call according to the VPI/VCI" (col. 3, lines 53-54). In this case, the DS1 and the channel identification are not "routing information contained within the data stream". As such, Examiner maintains that Martin discloses "forwarding the PDU [i.e., the ATM cell] through the broadband packet network [i.e., the ATM network] to an egress gateway [i.e., the destination SAC] irrespective of routing information contained within the data stream [i.e., where the VPI/VCI are not determined based on routing

information contained in the data stream since the VPI/VCI are determined using the DS1 and the channel identification]."

3. In addition, Examiner notes that the CIC, which Applicant asserts is used for forwarding in the "broadband packet network", is actually used for forwarding in the phone network. Martin discloses that the CIC is "selected to route the call from the originating switch to the terminating switch" (col. 2, lines 7-10), where the originating switch and the terminating switch are part of "local telephone switching systems" (col. 2, lines 2-3). Martin also teaches the "CIC code is inserted into the payload of each ATM cell so that the receiving SAC can route and reassemble the samples" (col. 3, lines 48-50). Thus, the "SAC 38 [the "receiving SAC"] performs conversion from ATM to PCM, performs DS 0 level switch according to the CIC in the payload, and delivers the call data or voice samples to DS1 40" (col. 3, lines 65-67). Here, the receiving SAC performs the forwarding based on the CIC after the data has been converted from ATM to PCM, which indicates that the forwarding performed based on the CIC is done on phone samples rather than ATM cells. As such, Examiner submits that the CIC is used to forward information on the phone network, not the broadband packet network.

4. In view of the foregoing, Examiner maintains that the claims are either anticipated or rendered obvious by the cited prior art.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 10, 26, 41, 51, 67, 82, 85, 92, 122, and 123 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin et al. (USPN 6,125,117), of record.

7. Regarding claims 1, 26, 41, 67, and 82, Martin discloses a method of and system for extending a data service of a legacy network through a broadband packet network (col. 3, lines 3-5, where the ATM switch 34 may be an individual switch or it may be a network of ATM switches, i.e. a broadband packet network), the method comprising steps of and the system comprising means for: a) at an ingress gateway (ref. 30: SAC and col. 3, lines 33-51, where the SAC interfaces between a PSTN network and an ATM network), accumulating payload data comprising a predetermined number of successive bytes of a data stream respecting the data service independently of a communications protocol of the data stream (col. 3, lines 45-50, where the SAC accumulates a predetermined number of successive voice or data samples received over the PSTN for placement in an ATM cell, wherein the "predetermined number" is the number of bytes that can fit into the ATM payload, see also col. 4, lines 20-25), the data stream being a legacy data stream originating in the legacy network and received by the ingress gateway through the legacy network (col. 3, lines 36-45, where the data or voice samples are part of a PSTN DS1 data stream originating in the PSTN and received by the SAC through the PSTN); b) encapsulating the payload data within a container (col. 3, lines 45-50, where the SAC "encapsulates" the data with a CIC code to form a "container," see also col. 4, lines 20-25); c) encapsulating the container within a protocol data unit (PDU) of the broadband packet network (col. 3, lines 45-50, where the combined CIC and data/voice samples are placed in the payload of an ATM cell, i.e. a PDU of the broadband packet network, see also col. 4, lines 20-25); d)

forwarding the PDU through the broadband packet network to an egress gateway irrespective of routing information contained within the data stream (col. 3, lines 42-45, where the SAC recognizes that information receiving over a certain connection is destined for a particular egress gateway, i.e. particular receiving SAC, and col. 3, lines 56-63, where the ATM cells are send over permanent virtual circuits, see also col. 1, lines 64-67, such that each cell is forwarded irrespective of routing information contained in the data stream); e) at the egress gateway, receiving sequential PDUs of the broadband packet network from the ingress gateway (col. 3, line 63-col. 4, line 2, where the receiving SAC 38 receives the ATM cells from the ATM network, see also col. 3, lines 3-5, and col. 56-61, where the use of a permanent virtual circuit means that the ATM cells will be received sequentially); (f) extracting a respective container from each received PDU (col. 3, line 63-col. 4, line 2, where the receiving SAC extracts the samples in the process of reconstructing the data stream); and (g) reconstructing the data stream using the respective containers (col. 3, lines 48-50, where the receiving SAC uses the CIC code and the samples contained in each container to reconstruct the data stream).

8. Regarding claims 85, 122, and 123, Martin discloses that the broadband packet network is based on any one or more of the UDP/IP, TCP/IP, IP-MPLS, ATM, Ethernet and DOCSIS protocols, and the data stream is based on any other communications protocol (col. 2, lines 63-66, where the broadband packet network uses the ATM protocol).

9. Regarding claims 10, 51, and 92, Martin discloses that the communications protocol of the data stream is unknown (col. 3, lines 45-48, where since the SAC can pack either data or voice samples into a given ATM cell, the SAC does not know the protocol of the samples, i.e.

the SAC only needs to know the DS1 channel of the samples for transmission of the samples across the ATM network).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 4, 5, 8, 9, 24, 25, 28, 29, 45, 46, 49, 50, 65, 66, 69, 70, 86, 87, 90, 91, 106, 107, 109, and 110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (USPN 6,125,117), of record, as applied to claims 1, 26, 41, 67, and 82 above, and further in view of Tweedly et al. (USPN 7,136,377), of record.

12. Regarding claims 4, 45, and 86, Martin does not expressly disclose that the communications protocol of the data stream is known. Tweedly teaches, in a system for packetizing voice information, that voice information may be compressed during the packetization process (col. 5, lines 8-21). It is implicit that this is done to conserve bandwidth. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the compression techniques of Tweedly with the system of Martin by having the SAC of Martin identify voice samples, i.e. determine the communications protocol of the data stream, to permit the SAC to perform voice compression techniques on the voice samples. One of ordinary skill in the art at the time of the invention would have been motivated to do this to yield better bandwidth efficiency in Martin's system.

13. Regarding claims 5, 46, and 87, Martin in view of Tweedly suggests that the predetermined number of bytes of the data stream forming each payload packet is a function of the format of the data stream. Martin discloses that the receiving SAC will reconstruct the data stream, where the data stream comprises both voice and data samples (Martin: col. 3, line 63-col. 4, line 2). The combination of Martin in view of Tweedly discloses that within this data stream the data samples will not have been compressed whereas the voice samples will have been compressed (Tweedly: col. 5, lines 8-21). As such, the receiving SAC must be able to identify which samples are voice samples and which samples are data samples so that the receiving SAC can decompress the voice samples. It would have been obvious to one of ordinary skill in the art at the time of the invention to identify voice samples by adding a signaling indicator to the CIC of voice containers to enable the receiving SAC to identify and properly decompress voice samples. By adding the signaling indicator to CIC voice contains, the amount of bandwidth in each container available to transmission of voice samples will be decreased as compared to data samples (but this slight decrease will be compensated for by the increased bandwidth efficiency due to the compression) so that the predetermined number of bytes of the data stream forming each payload packet is a function of the format of the data stream.

14. Regarding claims 8, 49, and 90, Martin in view of Tweedly suggest that the data stream is a packet data stream comprising sequential PDU's of a packet network protocol (Martin: col. 1, lines 59-60, where a data telephone call contains sequential PDUs of a packet network protocol).

15. Regarding claims 9, 50, and 91, Martin in view of Tweedly does not expressly disclose that the number of bytes forming each payload packet is an integer multiple of a number of bytes forming each PDU of the packet network protocol. However, it is generally considered to be

within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Martin in view of Tweedly discloses building payload packets using bytes from PDUs of the packet network protocol, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any relationship between the number of bytes forming each payload packet to the number of bytes forming each PDU of the packet network protocol, including an integer multiple, absent a showing of criticality.

16. Regarding claims 24, 65, and 106, Martin does not expressly disclose inserting a sequence number into each successive container. Tweedly teaches, in a system for transporting containers over a broadband network, inserting sequence numbers into successive containers to aid in identifying missing containers (col. 5, lines 29-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to insert a sequence number into each successive container to aid in identifying missing containers.

17. Regarding claims 25, 66, and 107, Martin in view of Tweedly does not expressly disclose that at least one sequence number is a reserved sequence number used to indicate a start of the data stream; however, Examiner takes official notice that indicating the start of a data stream is well known in the art as a way to signal to the receiver that useful information is forthcoming.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have at least one sequence number be a reserved sequence number used to indicate a start of the data stream to signal to the receiver that useful information is forthcoming.

18. Regarding claims 28, 69, and 109, Martin does not expressly disclose sorting the buffered containers based on a respective sequence number of each container. Tweedly teaches, in a system for transporting containers over a broadband network, inserting sequence numbers into successive containers to aid in ordering mis-ordered containers and identifying missing containers (col. 5, lines 29-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to sort the buffered containers based on a respective sequence number of each container to ensure the containers are in a proper sequence.

19. Regarding claims 29, 70, and 110, Martin in view of Tweedly suggests monitoring the respective sequence numbers of each buffered container to detect a missing container (Tweedly: col. 5, lines 29-32).

20. Claims 6, 47, and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (USPN 6,125,117), of record, in view of Tweedly et al. (USPN 7,136,377), of record, as applied to claims 5, 46, and 87 above, and further in view of Vargo et al. (USPN 6,477,164), of record.

21. Regarding claims 6, 47, and 88, Martin in view of Tweedly discloses that the data stream is a circuit-switched data stream comprising pulse code modulated PCM signals (Tweedly, col. 5, lines 14-21, where G.729 is PCM). Martin in view of Tweedly does not expressly disclose that the number of accumulated bytes forming each payload packet is determined by a number of channels and number of multi-frames of the data stream. However, Tweedly does disclose the

using a transport mechanism other than ATM to avoid the drawbacks of ATM, such as avoiding the difficultly of providing failover capability (col. 3, lines 40-54). Vargo teaches, in a system for transporting voice packets, that the size of the accumulated packet will depend upon the amount of information arriving in a given time (col. 5, lines 13-21). In addition, Vargo discloses that smaller packets have shorter delays since they do not have to wait for data to accumulate before being sent; however, longer packets are more efficient (col. 1, line 56-col. 2, line 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine the number of accumulated bytes forming each payload packet by a number of channels and number of multi-frames of the data stream in order to have longer packets when there is large amounts of data arriving in a given amount of time (large number of channels and multi-frames) such that the packets are more efficient, but having smaller packets when there is small amounts of data arriving in a given amount of time in order to permit the packets to be timely transmitted.

22. Claims 11-18, 20-23, 34-39, 52-59, 61-64, 75-80, 93-100, 102-105 and 115-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (USPN 6,125,117), of record, as applied to claims 1, 26, 41, and 82 above, and further in view of Naudus (USPN 6,259,691), of record.

23. Regarding claims 11, 52, and 93, Martin does not expressly disclose that the step of accumulating a payload packet comprises steps of: a) detecting an idle pattern; and b) when an idle pattern is detected, discarding bytes of the data stream corresponding to the detected idle pattern. Naudus teaches, in a system that converts between circuit and packet switched communication, that voice data has silence descriptors (col. 18, lines 2-5) which may be deleted

(col. 18, lines 25-28) where it is implicit that this would conserve bandwidth. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to a) detect an idle pattern (SID); and b) when an idle pattern is detected, to discard bytes of the data stream corresponding to the detected idle pattern in order to conserve bandwidth.

24. Regarding claims 12, 53, and 94, Martin in further view of Naudus discloses that the idle pattern in known (Naudus: col. 18, lines 2-5).

25. Regarding claims 13, 54, and 95, Martin in further view of Naudus discloses that the idle pattern is embedded within the data stream, and the step of detecting the idle pattern comprises a step of monitoring successively received bytes of the data stream to detect the idle pattern (Naudus: col. 18, lines 1-13).

26. Regarding claims 14, 55, and 96, Martin in further view of Naudus suggests that idle pattern is indicative of an idle channel within the data stream, and the step of discarding bytes of the data stream comprises a step of discarding bytes within the indicated idle channel of the data stream (Naudus: col. 18, lines 1-13, where the silence could come from an idle channel).

27. Regarding claims 15, 56, and 97, Martin in further view of Naudus discloses that the idle pattern is a stimulus external to the data stream (Naudus: col. 18, lines 1-13, where the SID is inserted into the data stream).

28. Regarding claims 16, 57, and 98, Martin in further view of Naudus discloses a step of forwarding an idle notification to the egress gateway, the idle notification comprising information identifying detected idle patterns and corresponding idle channels (Naudus: col. 18, lines 10-15, where the marker bit signifies that there was a silence interval on the given channel).

29. Regarding claims 17, 58, and 99, Martin in further view of Naudus discloses that the notification is forwarded within the container (Naudus: col. 18, lines 10-15, where the notification, as part of the RTP data header, is transmitted as part of the data stream).

30. Regarding claims 18, 59, and 100, Martin in further view of Naudus does not expressly disclose that the notification is forwarded within a notification message independently of the container. However, Examiner takes official notice that it is well known to send signaling independently of the main signal, where sending signaling within or ancillary to a signal is a design choice. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to forward the notification within a notification message independently of the container since ancillary signaling is well known in the art.

31. Regarding claims 20, 61, and 102, Martin in further view of Naudus discloses that the step of detecting the idle pattern comprises a step of monitoring successive payload data to detect a repeating pattern indicative of an idle condition of the circuit-switched data stream (Naudus: col. 18, lines 25-27, where the packetization module detects silence, i.e. a "repeating pattern indicative of an idle condition").

32. Regarding claims 21, 62, and 103, Martin in further view of Naudus discloses that the step of discarding bytes of the circuit-switched data stream comprises a step of discarding successive payload data in which the repeating pattern is detected (Naudus: col. 18, lines 25-27, where silence may be suppressed, i.e. payload data containing the repeating pattern are discarded).

33. Regarding claims 22, 63, and 104, Martin in further view of Naudus discloses a) interrupting the steps of encapsulating payload data within containers, encapsulating containers

within PDUs and forwarding the PDUs to the egress gateway; and b) sending an idle notification to the egress gateway (Naudus: col. 18, lines 25-26, where silence packets, i.e. idle notification, are sent to the egress gateway).

34. Regarding claims 23, 64, and 105, Martin in further view of Naudus discloses a) continuing to monitor successive payload data to detect the repeating pattern; and b) resuming the steps of encapsulating payload data within containers, encapsulating containers within PDUs and forwarding PDUs to the egress gateway when the repeating pattern is no longer detected (Naudus: col. 18, lines 25-26, where silence packets are sent only between talkspurts, i.e. the encapsulation of payload data, etc. is continued once the repeating pattern is no longer detected).

35. Regarding claims 34, 75, and 115, Martin does not expressly disclose that the step of reconstructing the data stream further comprises a step of receiving an idle notification from the ingress gateway. Naudus teaches, in a system that converts between circuit and packet switched communication, using silence descriptors to indicate that a data stream is idle (col. 18, lines 2-5 and col. 18, lines 25-28) where it is implicit that this conserves bandwidth. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to receive an idle notification from the ingress gateway in order to indicate that the data stream needs to have background noise inserted.

36. Regarding claims 35, 76, and 116, Martin in further view of Naudus discloses that the idle notification comprises information identifying one or more of an idle indication and a corresponding idle channel of the data stream received by the ingress gateway (Naudus: col. 18, lines 2-5), and the step of reconstructing the data stream further comprises a step of inserting null

data (silence) into the corresponding idle channel of the reconstructed data streams following receipt of the idle indication (Naudus: col. 18, lines 2-5).

37. Regarding claims 36, 77, and 117, Martin in further view of Naudus discloses that the null data includes the idle indication (Naudus: col. 18, lines 2-5).

38. Regarding claims 37, 78, and 118, Martin in further view of Naudus discloses that the idle notification comprises an indication of an idle condition of the data stream received by the ingress gateway (Naudus: col. 18, lines 2-5), and reconstructing the data stream comprises any one or more of duplicating a last received payload packet, and inserting a provisioned idle pattern (Naudus: col. 18, lines 2-5) where the "provisioned idle pattern" is the comfort background noise.

39. Regarding claims 38, 79, and 119, Martin in further view of Naudus discloses that the notification is received by the egress gateway encapsulated within a container (Naudus: col. 18, lines 2-5).

40. Regarding claims 39, 80, and 120, Martin in further view of Naudus does not expressly disclose that the notification is received by the egress gateway within a notification message independently of a container. However, Examiner takes official notice that it is well known to send signaling independently of the main signal, where sending signaling within or ancillary to a signal is a design choice. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to receive the notification within a notification message independently of the container since ancillary signaling is well known in the art.

41. Claims 27, 68, and 108 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (USPN 6,125,117), of record.

42. Regarding claims 27, 68, and 108, Martin discloses that the step of reconstructing the data stream comprises steps of: b) extracting a respective payload packet from each container (col. 3, line 65-col. 4, line 2); and c) appending each extracted payload packet to a payload packet of a previous container to reconstruct the data stream (col. 3, line 65-col. 4, line 2, where each sample is sent to DS1 40).

Martin does not expressly disclose a) buffering each container in a jitter buffer. Examiner takes official notice that jitter buffers are a well-known mechanism to correct for jitter. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to buffer each container in a jitter buffer in order to correct the jitter of the packets.

43. Claims 30, 31, 71, 72, 111, and 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (USPN 6,125,117), of record, in view of Tweedly et al. (USPN 7,136,377), of record, as applied to claims 29, 70, and 110 above, and further in view of Lin et al. (USPN 6,606,306), of record.

44. Regarding claims 30, 71, and 111, Martin in view of Tweedly does not expressly disclose appending a null payload packet to a previous payload packet of the reconstructed data stream in respect of each detected missing container. Lin teaches, in a packet communication network, inserting null packets in place of missing data packets (col. 5, lines 50-52) where it is implicit that this is done to ensure continuity in the data stream. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to append a null payload packet to a previous payload packet of the reconstructed data stream in respect of each detected missing container in order to ensure continuity in the data stream.

45. Regarding claims 31, 72, and 112, Martin in view of Tweedly in further view of Lim suggests that the null payload packet comprises AB-bits duplicated from the previous payload packet of the reconstructed data stream. Here, Martin in view of Tweedly in further view of Lim teaches duplicating pertinent information from previous packets (Lim: col. 5, lines 24-52). It would have been obvious to one of ordinary skill in the art at the time of the invention to duplicate the AB-bits (robbed bits) from the previous payload packet in order to ensure continuity of the AB-bits.

46. Claims 32, 33, 73, 74, 113, and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (USPN 6,125,117), of record, as applied to claims 27, 68, and 108 above, and further in view of Ohlsson et al. (USPN 6,452,950), of record.

47. Regarding claims 32, 73, and 113, Martin does not expressly disclose a) monitoring an inter-packet delay period between successively received PDU's; and b) adjusting a length of the jitter buffer based on the inter-packet delay. Ohlsson teaches, in a packet communication system, a) monitoring an inter-packet delay period between successively received PDU's (col. 2, lines 36-45); and b) adjusting a length of the jitter buffer based on the inter-packet delay (col. 2, lines 36-45) in order to minimize delays in packet delivery (col. 1, lines 5-8). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to monitor an inter-packet delay period between successively received PDU's and to adjust a length of the jitter buffer based on the inter-packet delay in order to minimize delays in packet delivery.

48. Regarding claims 33, 74, and 114, Martin in view of Ohlsson discloses that the length of the jitter buffer is adjusted during an idle period of the data stream (Ohlsson: col. 2, lines 59-62).

49. Claims 40, 81, and 121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (USPN 6,125,117), of record, in view of Naudus (USPN 6,259,691), of record, as applied to claims 34, 75, and 115 above, and further in view of Tweedly et al. (USPN 7,136,377), of record.

50. Regarding claims 40, 81, and 121, Martin in further view of Naudus does not expressly disclose resuming reconstruction of the data stream based on containers extracted from received PDU's upon receipt of a container having a predetermined reserved sequence number. However, Naudus discloses setting a flag in the packet having data after a period of silence (Naudus: col. 18, lines 10-13). Tweedly teaches, in a system for transporting containers over a broadband network, inserting sequence numbers into successive containers to aid in identifying missing containers (col. 5, lines 29-32). It would have been obvious to one of ordinary skill in the art at the time of the invention to set the sequence number to a particular number in order to signal the system that the silence period is over since this does not require extra signaling bandwidth.

Allowable Subject Matter

51. Claims 7, 48, and 89 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or fairly suggest determining the number of accumulated bytes according to the given equation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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